SONY

2-888-034-**12**(1)

LCD Digital Color TV

Operating Instructions

⚠ Before operating the TV, please read the “Safety information” section of this manual.
Retain this manual for future reference.

KDL-46V2000
KDL-40V2000
KDL-32V2000

BRAVIA

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Notice for Digital TV function

- Any functions related to Digital TV (with DVB logo) will only work in areas where DVB-T (MPEG2) digital terrestrial signals are broadcasted. Please confirm with your local dealer if you can receive a DVB-T signal where you live.
- Although this TV set follows DVB-T specifications, compatibility with future DVB-T digital terrestrial broadcasts cannot be guaranteed.
- Some Digital TV functions may not be available in some areas.

Introduction

Thank you for choosing this Sony product.
Before operating the TV, please read this manual thoroughly and retain it for future reference.

Trademark information

- DVB is a registered trademark of the DVB Project
- Manufactured under license from BBE Sound, Inc. Licensed by BBE Sound, Inc. under one or more of the following US patents: 5510752, 5736897. BBE and BBE symbol are registered trademarks of BBE Sound, Inc.
- "Dolby" and the double-D symbol are trademarks of Dolby Laboratories.
- Manufactured under license from Dolby Laboratories.
- TruSurround XT, SRS and (●) symbol are trademarks of SRS Labs, Inc.
  TruSurround XT technology is incorporated under license from SRS Labs, Inc.
- HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.

- The illustrations used in this manual are of the KDL-32V2000 unless otherwise stated.

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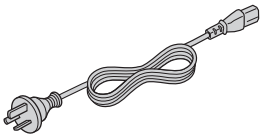
DVB : for digital channels only

1: Checking the accessories

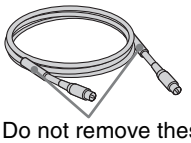
Remote RM-ED005 (1)

Size AA batteries (R6 type) (2)

AC power cord (1)

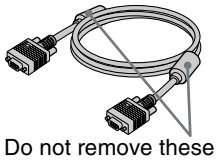


Antenna cable (1)



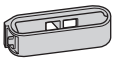
Do not remove these ferrite cores.

PC cable (1)

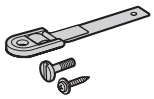


Do not remove these ferrite cores.

Cable holder (1)

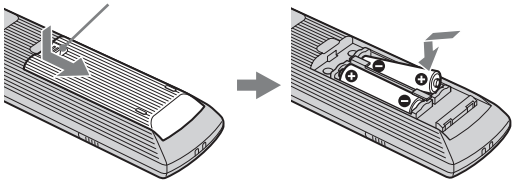


Support belt (1) and screws (2)



To insert batteries into the remote

Push and slide to open.

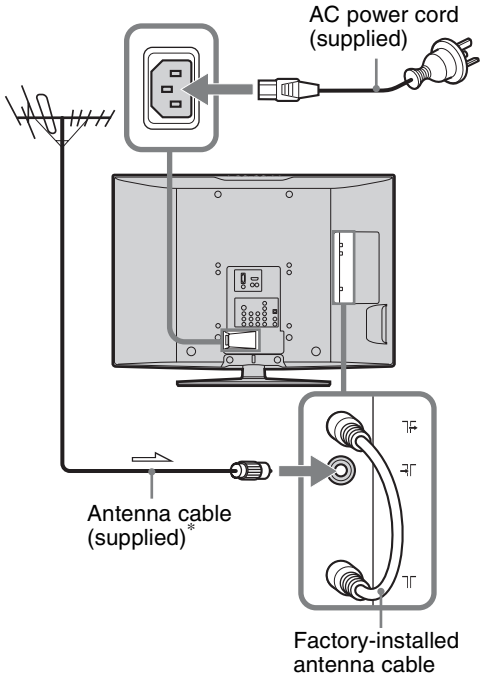


Notes

- Observe the correct polarity when inserting batteries.
- Do not use different types of batteries together or mix old and new batteries.
- Dispose of batteries in an environmentally friendly way. Certain regions may regulate disposal of the battery. Please consult your local authority.
- Handle the remote control with care. Do not drop or step on it, or spill liquid of any kind onto it.
- Do not place the remote control in a location near a heat source, or in a place subject to direct sunlight, or in a damp room.

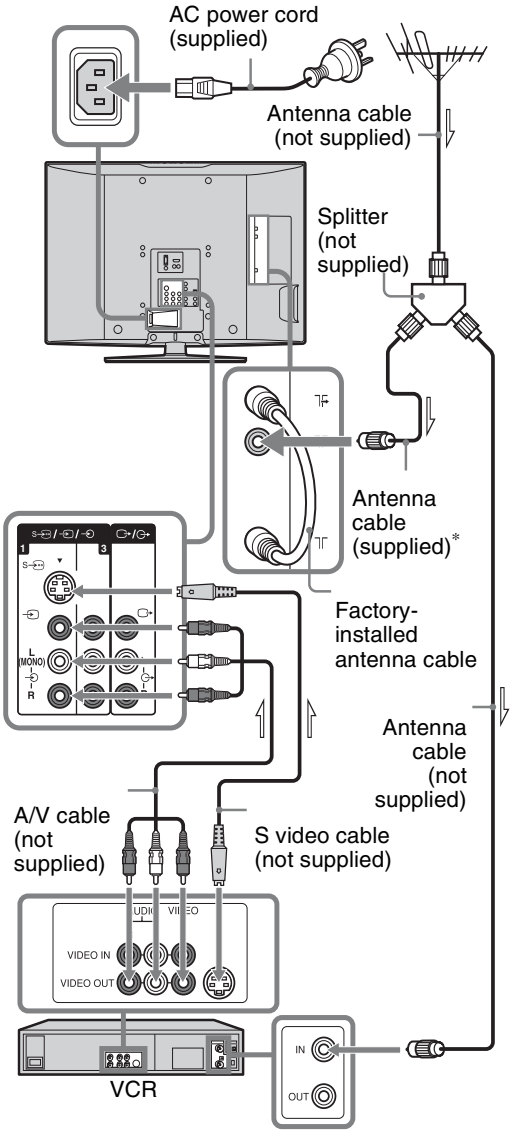
2: Connecting an antenna/VCR

Connecting an antenna only



Connecting an antenna and VCR

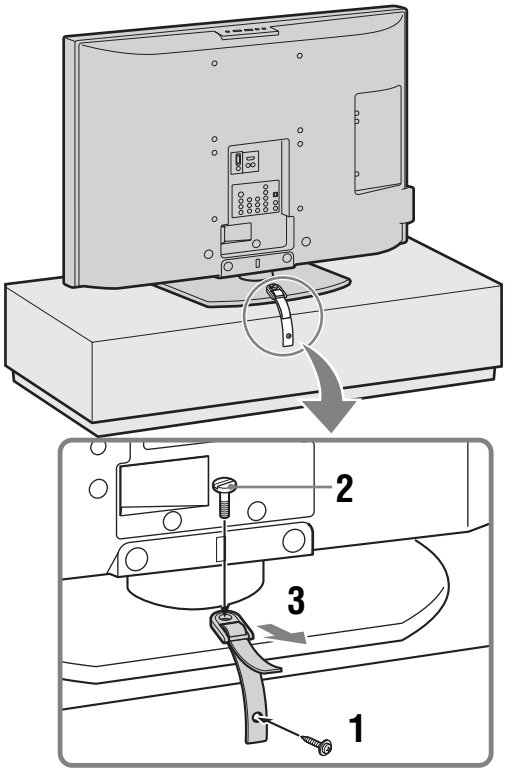
We recommend that you use a splitter to connect the antenna to the TV and to the VCR etc. This should ensure that signal loss is reduced as much as possible.



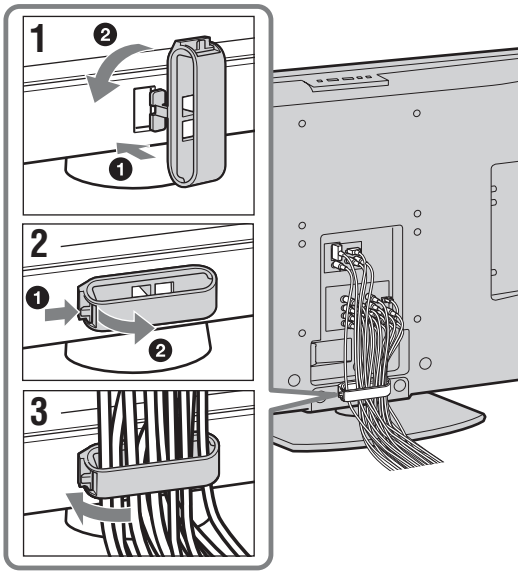
: Signal flow

* When connecting an antenna cable, an adaptor (not supplied) may be required.

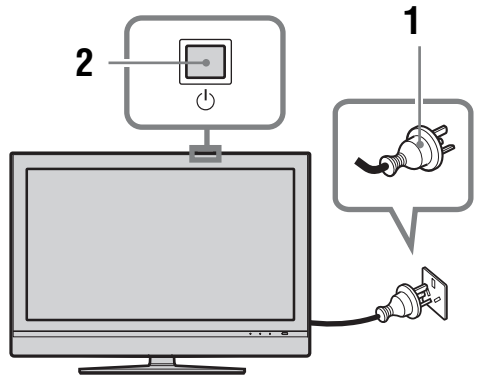
3: Preventing the TV from toppling over

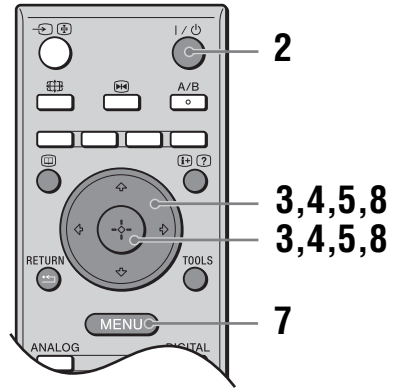


4: Bundling the cables



5: Auto-tuning the TV



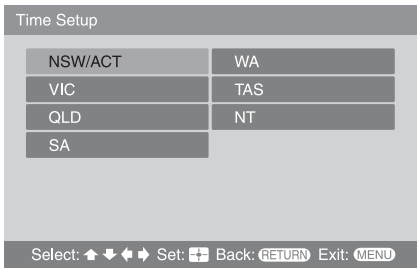


1 Connect the TV to your AC power outlet (220-240 V AC, 50 Hz).

2 Press ⏻ on the TV (top side).

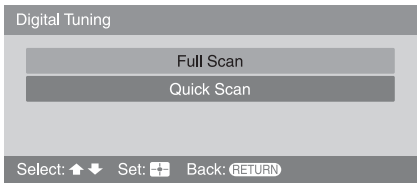
When you switch on the TV for the first time, the Time Setup menu appears on the screen.
When the TV is in standby mode (the ⏻ (standby) indicator on the TV (front) is red), press **I**/⏻ on the remote to switch on the TV.

3 Press ⇧/⇩/⇦/⇨ to select the state/region in which you will operate the TV, then press ⊕.



This option allows you to set the time zone in which you will operate the TV. This will ensure that the time displayed on the i-Plate (page 16) is correct.

4 Press ⇧/⇩ to select “Full Scan” or “Quick Scan” to preset channels, then press ⊕.



“Full Scan”: All available channels are tuned and stored. This procedure may take some time.
“Quick Scan”: All expected channels in your area are tuned and stored. You will need to select your nearest city to help speed up this procedure.

5 Press ⇦/⇨ to select “OK”, then press ⊕.

A display appears showing a tuning progress bar and the channels tuned and stored.
The TV starts searching for all available digital channels, followed by all available analog channels. This may take some time, please be patient and do not press any buttons on the TV or remote.

If a message appears for you to confirm the antenna connection

No digital or analog channels were found. Check the antenna connection and select “Confirm”, then press ⊕ to start auto-tuning again.

If no analog channels were found and one or more digital channels were found

Go to step 8.

6 When the Program Sorting menu appears on the screen, follow the steps of “Program Sorting” (page 30).

If you do not change the order in which the analog channels are stored on the TV, go to step 7.

7 Press MENU to exit.

The TV has now tuned in all the available channels.

8 Press ⇦/⇨ to select the desired setting in “Display this menu next time ?” dialog, then press ⊕ to exit.

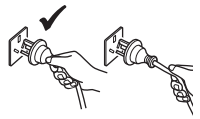
Tip

If “Yes” is selected and the TV is switched off by pressing ⏻ on the TV, or is disconnected from the AC power outlet, the auto startup procedure restarts the next time the TV is switched on.

Safety information

AC power cord

- Observe the followings to prevent the AC power cord being damaged. If the AC power cord is damaged, it may result in a fire or an electric shock.
  - Unplug the AC power cord when moving the TV set.
  - When you disconnect the AC power cord, disconnect it from the AC power outlet first.
  - Be sure to grasp the plug when disconnecting the AC power cord. Do not pull on the AC power cord itself.
  - Do not pinch, bend, or twist the AC power cord excessively. The core conductors may be exposed or broken.
  - Do not modify the AC power cord.
  - Do not put anything heavy on the AC power cord.
  - Keep the AC power cord away from heat sources.



- If you damage the AC power cord, stop using it and ask your dealer or Sony service center to exchange it.
- Do not use the supplied AC power cord on any other equipment.
- Use only an original Sony AC power cord, not other brands.

AC power outlet

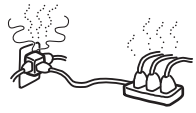
- The TV set with a three-wire grounding type AC power plug must be connected to a AC power outlet with a protective earthing connection.
- Do not use a poor fitting AC power outlet. Insert the plug fully into the AC power outlet. A poor fit may cause arcing and result in a fire. Contact your electrician to have the AC power outlet changed.

Cleaning the AC power plug

Unplug the AC power plug and clean it regularly. If the plug is covered with dust and it picks up moisture, its insulation may deteriorate and result in a fire.

Overloading

This TV set is designed to operate on a 220–240 V AC supply only. Take care not to connect too many appliances to the same AC power outlet as this could result in a fire or an electric shock.



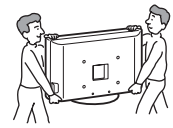
When not in use

- If you will not be using the TV set for several days, the TV set should be disconnected from the AC power outlet for environmental and safety reasons.

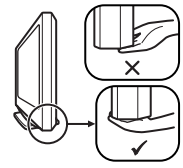
- The TV set is not disconnected from the AC power source when the TV set is switched off. To disconnect the TV set completely, pull the plug from the AC power outlet. However, some TV sets may have features which need the TV set to be left in standby to work correctly. The instructions in this manual will inform you if this applies.

Carrying

- Before carrying the TV set, disconnect all the cables from the TV set.
- Carrying the large size TV set requires two or more people.
- When you carry the TV set by hand, hold the TV set as illustrated on the right. When lifting the TV set or moving the panel of the TV set, hold it firmly from the bottom. If you do not do so, the TV set may fall and be damaged or cause serious injury.



- When transporting it, do not subject the TV set to jolts or excessive vibration. The TV set may fall and be damaged or cause serious injury.



- If the TV set has been dropped or damaged, have it checked immediately by qualified service personnel.
- When you carry the TV set in for repair or when you move it, pack it using the original carton and packing material.

Placement

- The TV set should be installed near an easily accessible AC power outlet.
- Place the TV set on a stable, level surface. Do not hang anything on the TV set. If you do, the TV set may fall from the stand, causing damage or serious injury.

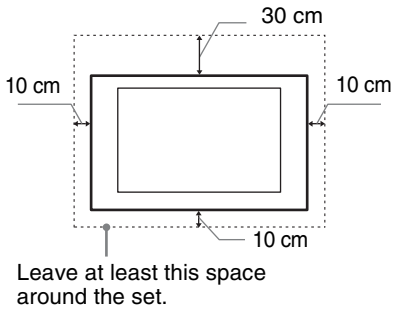
- Do not install the TV set in places subject to extreme temperature, for example in direct sunlight, or near a radiator, or heating vent. If the TV set is exposed to extreme temperature, the TV set may overheat and cause deformation of the casing or cause the TV set to malfunction.
- Do not install the TV set in a place exposed to direct air conditioning. If the TV set is installed in such a location, moisture may condense inside and may cause a malfunction.
- Never place the TV set in hot, only, humid or excessively dusty places.
- Do not install the TV set where insects may enter.
- Do not install the TV set where it may be exposed to mechanical vibration.

- Do not install the TV set in a location where it may protrude, such as on or behind a pillar, or where you might bump your head on it. Otherwise, it may result in injury.
- Do not allow children to climb on the TV set.
- If you use the TV set near the seashore, salt may corrode metal parts of the TV set and cause internal damage or fire.

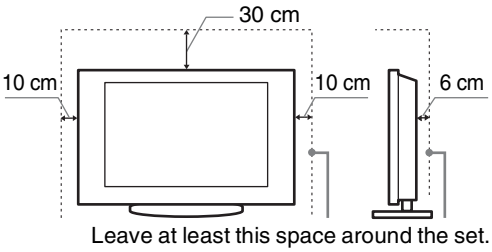
Ventilation

- Never cover the ventilation holes or insert anything in the cabinet. It may cause overheating and result in a fire.
- Unless proper ventilation is provided, the TV set may gather dust and get dirty. For proper ventilation, observe the following:
  - Do not install the TV set turned backwards or sideways.
  - Do not install the TV set turned over or upside down.
  - Do not install the TV set on a shelf or in a closet.
  - Do not place the TV set on a rug or bed.
  - Do not cover the TV set with cloth, such as curtains, or items such as newspapers, etc.
- Leave some space around the TV set as shown below. Otherwise, air-circulation may be inadequate and cause overheating, which may cause a fire or damage to the TV set.

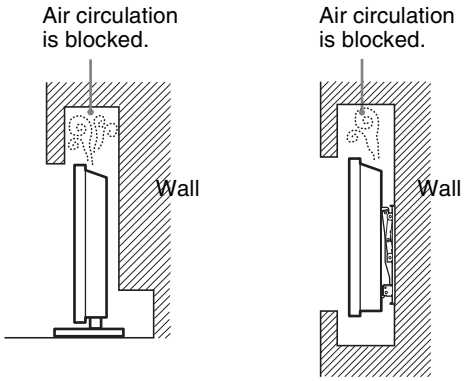
Installed on the wall



Installed with stand



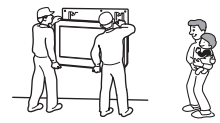
- Never install the TV set as follows:



Optional accessories

Observe the following when installing the TV set using a stand or wall-mount bracket. If you do not do so, the TV set may fall and cause serious injury.

- It is strongly recommended that you use Sony accessories for safety reasons:
  - Wall-mount bracket
    SU-WL53 (for KDL-46V2000/KDL-40V2000/ KDL-32V2000)
    SU-WL51 (for KDL-46V2000/KDL-40V2000)
    SU-WL31 (for KDL-32V2000)
- It is strongly recommended that you use the official Sony wall-mount bracket to allow adequate air circulation and to avoid accumulated dust on the TV.
- If the TV set is to be installed on a wall, have the installation carried out by qualified service personnel. Improper installation may render the TV set unsafe.



- Secure the TV set properly, following the instructions supplied with your stand when installing the TV set.
- Be sure to attach the brackets supplied with your stand.

Wiring

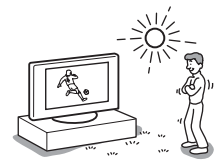
- When wiring cables, be sure to unplug the AC power cord for your safety.
- Take care not to catch your feet on the cables. It may damage the TV set.

Medical institutions

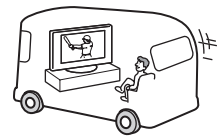
Do not place this TV set in a place where medical equipment is in use. It may cause a malfunction of medical instruments.

Outdoor use

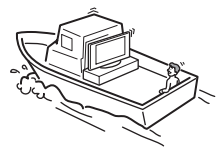
- Do not install this TV set outdoors. If the TV set is exposed to rain, it may result in a fire or an electric shock.
- If this TV set is exposed to direct sunlight, the TV set may heat up and it may damage the TV set.



Vehicle, Ships and other vessels



- Do not install this TV set in a vehicle. The motion of the vehicle may cause the TV set to fall down and cause injury.
- Do not install this TV set on a ship or other vessel. If the TV set is exposed to seawater, it may cause a fire or damage the TV set.

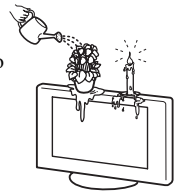


Continued

Water and moisture

- Do not use this TV set near water – for example, near a bathtub or shower room. Also do not expose to rain, moisture or smoke. This may result in a fire or an electric shock.
- Do not touch the AC power cord and the TV set with wet hands. Doing so may cause an electric shock or damage to the TV set.

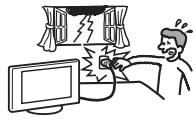
Moisture and flammable objects



- Do not place any objects on the TV set. The TV set shall not be exposed to dripping or splashing and that no objects filled with liquid, such as vases, shall be placed on the TV set.
- To prevent fire, keep flammable objects or naked lights (e.g. candles) away from the TV set.
- If any liquid or solid object does fall through openings in the cabinet, do not operate the TV set. It may result in an electric shock or damage to the TV set. Have it checked immediately by qualified service personnel.

Lightning storms

For your own safety, do not touch any part of the TV set, AC power cord, or antenna cord during lightning storms.



Broken pieces

- Do not throw anything at the TV set. The screen glass may break by the impact and cause serious injury.
- If the surface of the TV set cracks, do not touch it until you have unplugged the AC power cord. Otherwise electric shock may result.

Servicing

Dangerously high voltages are present inside the TV set.
Do not open the cabinet. Entrust the TV set to qualified service personnel only.

Small accessories removal and fittable

Keep small accessories out of children’s reach.

Precautions

Viewing the TV

- To view the TV comfortably, the recommended viewing position is from four to seven times the screen's vertical length away from the TV set.
- To obtain a clear picture, do not expose the screen to direct illumination or direct sunlight. If possible, use spot lighting directed down from the ceiling.
- View the TV in moderate light, as viewing the TV in poor light or during long period of time, strains your eyes.

Volume adjustment

- Adjust the volume so as not to trouble your neighbours. Sound carries very easily at night time. Therefore, closing the windows or using headphones is suggested.
- When using headphones, adjust the volume so as to avoid excessive levels, as hearing damage may result.

LCD Screen

- Although the LCD screen is made with high-precision technology and 99.99% or more of the pixels are effective, black dots may appear or bright points of light (red, blue, or green) may appear constantly on the LCD screen. This is a structural property of the LCD screen and is not a malfunction.
- Do not push or scratch the front filter, or place objects on top of this TV set. The image may be uneven or the LCD screen may be damaged.
- If this TV set is used in a cold place, a smear may occur in the picture or the picture may become dark. This does not indicate a failure. These phenomena disappear as the temperature rises.
- Ghosting may occur when still pictures are displayed continuously. It may disappear after a few moments.
- The screen and cabinet get warm when this TV set is in use. This is not a malfunction.
- The LCD screen contains a small amount of liquid crystal and mercury. The fluorescent tube used in this TV set also contains mercury. Follow your local ordinances and regulations for disposal.

Handling and cleaning the screen surface/cabinet of the TV set

Be sure to unplug the AC power cord connected to the TV set from AC power outlet before cleaning.
To avoid material degradation or screen coating degradation, observe the following precautions.

- Do not push on the screen, scratch it with a hard object, or throw anything at it. The screen may be damaged.
- Do not touch the display panel after operating the TV set continuously for a long period as the display panel becomes hot.
- We recommend that the screen surface be touched as little as possible.
- To remove dust from the screen surface/cabinet, wipe gently with a soft cloth. If dust is persistent, wipe with a soft cloth slightly moistened with a diluted mild detergent solution.
- Never use any type of abrasive pad, alkaline/acid cleaner, scouring powder, or volatile solvent, such as alcohol, benzene, thinner or insecticide. Using such materials or maintaining prolonged contact with rubber or vinyl materials may result in damage to the screen surface and cabinet material.
- The ventilation holes can accumulate dust over time. To ensure proper ventilation, we recommend removing the dust periodically (once a month) using a vacuum cleaner.
- If the angle of the TV set is to be adjusted, steady the base of the stand with your hand to prevent the TV set from becoming separated from the stand. Be careful not to get your fingers caught between the TV set and the stand.
- Do not attach anything (e.g., adhesive tape, cellophane tape, glue) on the painted cabinet or screen surface of the TV.

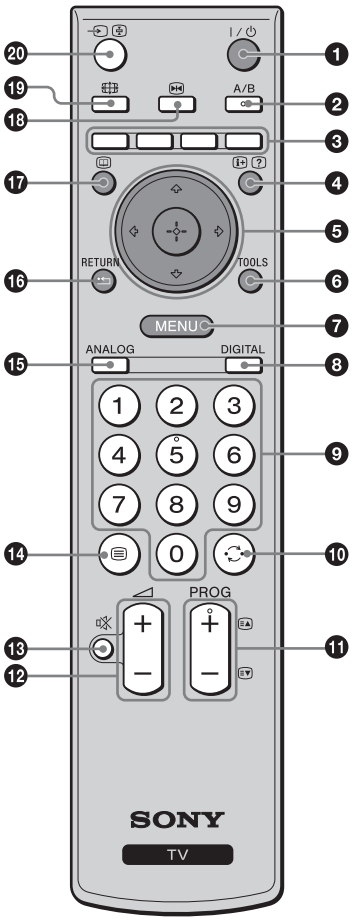
Optional Equipments

- Do not install optional components too close to the TV set. Keep optional components at least 30 cm away from the TV set. If a VCR is installed in front of the TV set or beside the TV set, the picture may become distorted.
- Picture distortion and/or noisy sound may occur if the TV set is positioned in close proximity to any equipment emitting electromagnetic radiation.

Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems)

This symbol is on the remote control.

Overview of the remote



❶ I/⏻ – TV standby

Switches off the TV temporarily and on from standby mode.

❷ A/B – Dual Sound

Enables you to select for dual sound (page 23) and select the audio type (Dolby Digital or MPEG Audio) in Digital mode.

❸ Colored buttons (page 14)

❹ ⓘ+/? – Info / Text reveal

- In digital mode (page 16): Displays details of the current or next program.
- In analog mode: Displays information such as current channel number and screen format.
- In Text mode (page 14): Reveals hidden information (e.g. answers to a quiz).

❺ ↑/↓/←/→/⊕ (page 19)

❻ TOOLS (page 16, 18, 36)

Enables you to access various viewing options and change/make adjustments according to the source and screen format.

❼ MENU (page 19)

❽ DIGITAL - Digital mode (page 14)

❾ Number buttons

- In TV mode: Selects channels. For channel numbers 10 and above, enter the second, third or fourth digit quickly.
- In Text mode: Enters the three digit page number to select the page.

❿ ↻ – Previous channel

Returns to the previous channel watched (for more than five seconds).

⓫ PROG +/-/▲/▼ (page 14)

- In TV mode: Selects the next (+) or previous (-) channel.
- In Text mode: Selects the next (▲) or previous (▼) page.

⓬ +/- – Volume

⓭ – Mute (page 14)

⓮ ☰ – Text (page 14)

⓯ ANALOG – Analog mode (page 14)

⓰ ⮌ / RETURN

Returns to the previous screen of any displayed menu.

⓱ 🕮

This button has no function for this TV.

⓲ ⏯ – Picture freeze (page 15)

Freezes the TV picture.

⓳ – Wide mode (page 15)

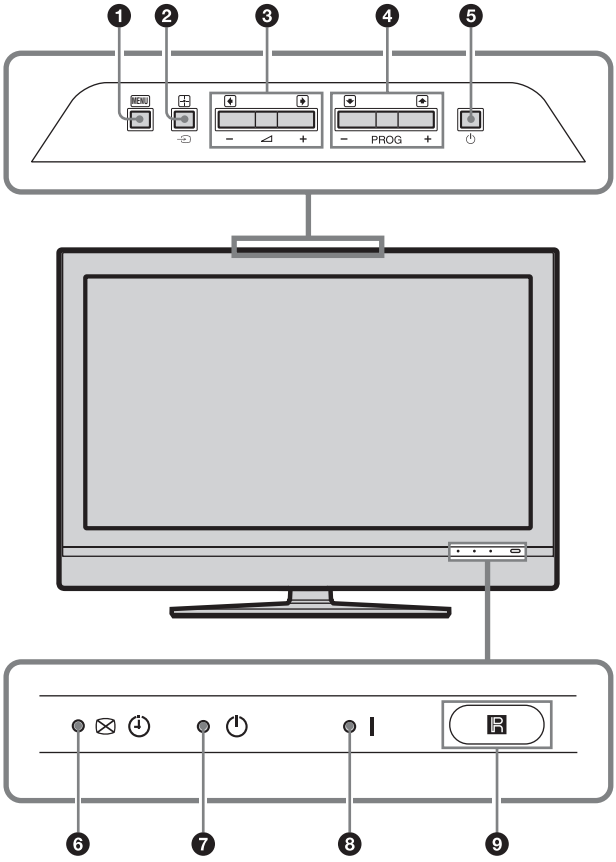
⓴ ⏎/⏬ – Input select / Text hold

- In TV mode (page 18): Selects the input source from equipment connected to the TV jacks.
- In Text mode (page 14): Holds the current page.

Tip

The A/B, PROG + and number 5 buttons have tactile dots. Use the tactile dots as references when operating the TV.

Overview of the TV buttons and indicators



1 MENU **(page 19)**

2 **/ – Input select/OK**

- In TV mode (page 18): Selects the input source from equipment connected to the TV jacks.
- In TV menu: Selects the menu or option, and confirms the setting.

3 **+/-/ / **

- In TV mode: Increases (+) or decreases (-) the volume.
- In TV menu: Moves through the options right ( ) or left ( ).

4 **PROG +/-/ / **

- In TV mode: Selects the next (+) or previous (-) channel.
- In TV menu: Moves through the options up ( ) or down ( ).

5 **– Power**

Switches the TV on or off.

6 **– Picture Off/Timer indicator**

- Lights up in green when the picture is switched off (page 27).
- Lights up in orange when the timer is set (page 26).

7 **– Standby indicator**

Lights up in red when the TV is in standby mode.

8 **– Power indicator**

- Lights up in green when the TV is switched on.
- Flashes while the remote is being operated.

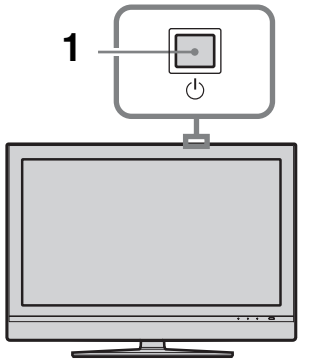
9 **– Remote control sensor/Light sensor (page 27)**

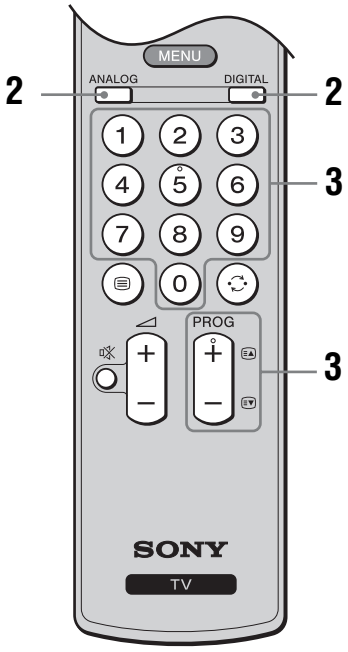
- Receives IR signals from the remote.
- Do not put anything over the sensor, as its function may be affected.

Note

Make sure that the TV is completely switched off before unplugging the AC power cord. Unplugging the AC power cord while the TV is turned on may cause the indicator to remain lit or may cause the TV to malfunction.

Watching TV





1 Press ⏻ on the TV (top side) to switch on the TV.

When the TV is in standby mode (the ⏻ (standby) indicator on the TV (front) is red), press I/⏻ on the remote to switch on the TV.

2 Press DIGITAL to switch to digital mode or ANALOG to switch to analog mode.

The channels available vary depending on the mode.

3 Press the number buttons or PROG +/- to select a TV channel.

To select channel numbers 10 and above using the number buttons, enter the second, third or fourth digits quickly.
In digital mode, an information banner appears briefly. The following icons may be indicated on the banner.

In normal TV mode

SD : SD (or HD : HD)
RADIO: Radio service
PG: Parental rating
: Multi audio program
: Text service

Additional operations

To	Do this
Switch off the TV temporarily (standby mode)	Press I/⏻.
Switch off the TV	Press ⏻ on the TV (top side).
Switch on the TV without sound from standby mode	Press 🔇. Press +/- to adjust the volume.
Adjust the volume	Press + (increase)/ - (decrease).
Mute the sound	Press 🔇. Press again to restore.

To access Text

Press ☰. Each time you press ☰, the display changes cyclically as follows:
In analog mode: Text → Text over the TV picture (mix mode) → No Text (exit the Text service)
In digital mode: Text → No Text (exit the Text service)

To select a page, press the number buttons or /.
To hold a page, press /.
To reveal hidden information, press /.

Tips

- Ensure that the TV is receiving a good signal, or some text errors may occur.
- When four colored items appear at the bottom of the Text page, Fastext is available (in analog mode only). Fastext allows you to access pages quickly and easily. Press the corresponding colored button to access the page.

To freeze the picture – Picture freeze

You can freeze the current picture to make a note of a telephone number or recipe.

1 Press ⏯.

2 Press ⇧/⇩/⇦/⇨ to adjust the position of the window.

3 Press ⏯ to remove the window.

4 Press ⏯ again to return to normal TV mode.

To change the screen format manually – Wide Mode

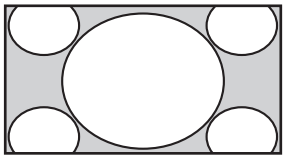
Press ⇔ repeatedly to select Wide Zoom, Normal, Full or Zoom.

Note

This option is fixed to "Full" in digital mode or when input signals are 720p, 1080i.

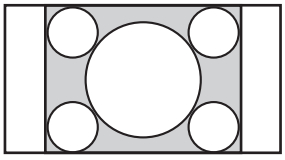
For TV, Video, HD/DVD or HDMI (other than PC Input)

Wide Zoom*



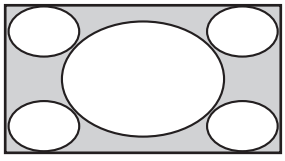
Enlarges the center portion of the picture. The left and right edges of the picture are stretched to fill the 16:9 screen.

Normal



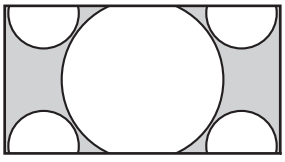
Displays the 4:3 picture in its original size. Side bars are shown to fill the 16:9 screen.

Full



Stretches the 4:3 picture horizontally, to fill the 16:9 screen.

Zoom*



Displays cinemascopic (letter box format) broadcasts in the correct proportions.

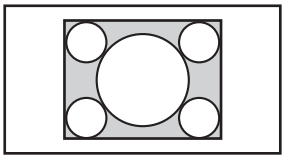
* Parts of the top and bottom of the picture may be cut off.

Tips

- Alternatively, you can set "Auto Wide" to "On". The TV will automatically select the best mode to suit the broadcast (page 24).
- In Zoom, you can adjust the picture position (e.g. to read subtitles) using the Vertical Shift option selected from Tools menu (see page 16).

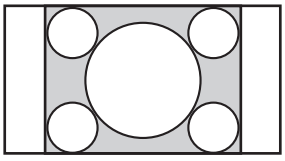
For PC Input

Normal



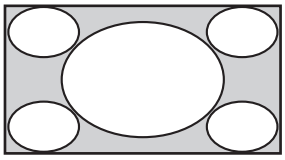
Displays the picture in its original pixel size. Bars are shown at the top, bottom, and both sides for small picture.

Full 1



Stretches the original picture to fill the screen vertically.

Full 2



Stretches the Full 1 picture horizontally to fill the 16:9 screen.

Continued

To use the Tools menu

Press TOOLS to display the following options when viewing a TV program.

Options	Description
Close	Closes the Tools menu.
Power Saving	See page 27
Favorite List (in digital mode only)	See page 17
PIP Program List (in digital mode only)	See page 16
Picture Mode	See page 20
Sound Mode	See page 22
Vertical Shift (in analog mode only)	See page 24
Vertical Size (in analog mode only)	See page 25
Sleep Timer	See page 26

To view two pictures simultaneously – PIP (Picture in Picture) (in digital mode only)

This feature allows you to view a different sub-channel in a window and also access multiview services (when available from broadcaster, e.g. different camera angles).

1 Press TOOLS to display the Tools menu.

2 Press ⇧/⇩ to select “PIP Program List”, then press ⊕.

3 Press ⇧/⇩ to select the required channel/ multiview service, then press ⊕.

To return to normal TV mode

Select “PIP Program List” from the Tools menu. Then, select “Close PIP”.

Note

Depending on the broadcast signal, the image displayed on the PIP sub screen may be smaller than its frame size.

i-Plate display

This feature gives you information on the current channel and also the current and next programs.

1 Press i+ to display the i-Plate.

This shows the date, time, whether the channel has text service, whether multi (MPEG and Dolby Digital) audio program available and whether the picture is available in high definition or standard definition (HD or SD is displayed).

2 Press i+ to display information on the following program.

3 Press i+ again (or MENU) to turn off the i-Plate display and return to normal operation.

The following icons may be displayed on the i-Plate display according to the program.

In normal TV mode

SD : SD (or HD : HD)
PG : Parental rating
: Multi audio program
: Text service

Tip

The code coming after MPEG determines the language type. For detail, refer to “i-Plate Display Language Code” on page 38.

Using the Favorite List DVB*

Favorite List

The Favorite feature allows you to select programs from a list you specify. To display the Favorite List, see “Navigating through menus” (page 19).

* This function may not be available in some areas.

To	Do this
Create your Favorite List	Follow the steps of “Favorite Preset” (page 33) in Digital Setup menu.
Watch a Favorite channel	**1** Press MENU to display the menu (page 19). **2** Press ↑/↓ to select “Digital Favorite List”, then press ⊕. **3** Press ←/→ to select “Favorite List 1” or “Favorite List 2”. **4** Press ↑/↓ to select your favorite channel. **5** Press ⊕ to exit the Favorite List and display the selected channel. **Tip** Once you select a channel within your Favorite List of channels, pressing PROG +/- will select only channels from your Favorite List. To select a channel that has not been programmed as a Favorite List channel, use the Program List feature or the number buttons.
Turn off the Favorite list	Press MENU.

Viewing pictures from connected equipment

Switch on the connected equipment, then press ⊡/⊡ repeatedly until the correct input symbol (see below) appears on the screen. For details of connecting the other equipment, see page 34.

On screen display	Labels of input jacks
⊡ Video 1 or S⊡ Video 1	⊡ or S⊡, and ⊡ L(MONO)/R
⊡ Video 2 or S⊡ Video 2	⊡ or S⊡, and ⊡ L(MONO)/R
⊡ Video 3	⊡ and ⊡ L(MONO)/R
⊡ HD/DVD	⊡ Y, PB/CB, PR/CR and ⊡ L/R
⊡ HDMI	HDMI IN and ⊡ L/R
PC	PC IN ⊡ (RGB) and ⊡

To return to normal TV mode

Press DIGITAL or ANALOG.

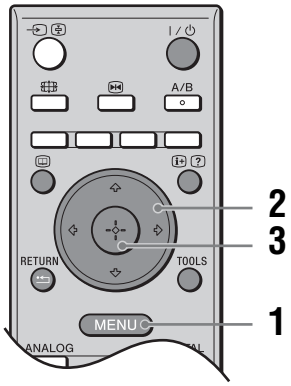
To use the Tools menu

Press TOOLS to display the following options when viewing pictures from connected equipment other than a PC.

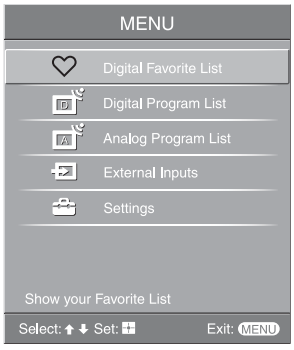
Options	Description
Close	Closes the Tools menu.
Power Saving	See page 27
Picture Mode	See page 20
Sound Mode	See page 22
Vertical Shift	See page 24
Vertical Size	See page 25
Sleep Timer	See page 26

Navigating through menus

"MENU" allows you to enjoy various convenient features of this TV. You can easily select channels or inputs sources and change the settings for your TV.



1 Press MENU to display the menu.



Icon	Description
	Digital Favorite List* Displays the Favorite List. For details about settings, see page 17.
	Digital Program List* Displays available digital TV channels.
	Analog Program List Displays available analog TV channels. • To assign a label to a channel, see page 30.
	External Inputs Selects equipment connected to your TV. • To watch the desired external input, select the input source, then press ⊕. • To assign a label to an external input, select "Edit Video Labels", then see page 26.
	Settings Displays the Settings menu where most of the advanced settings and adjustments are performed. For details about settings, see page 20 to 33. **Note** The options you can adjust vary depending on the situation. Unavailable options are grayed out or not displayed.

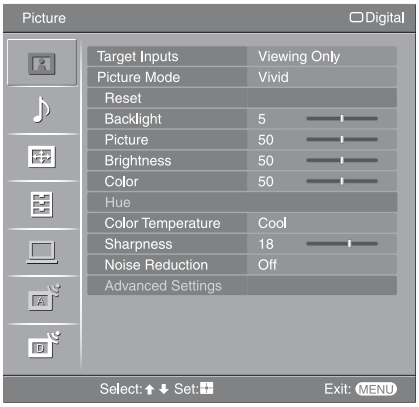
* This function may not be available in some areas.

2 Press ⇧/⇩ to select an option.

3 Press ⊕ to confirm a selected option.

To exit the menu, press MENU.

Picture menu



You can select the options listed below on the Picture menu.

1 Press ⇧/⇩ to select “Settings” on MENU, then press ⊕.

2 Press ⇧/⇩ to select a menu icon, then press ⊕.

3 Press ⇧/⇩/⇦/⇨ to select an option.

Target Inputs

Selects whether to apply settings made in the Picture menu to all inputs, or only to the input currently being watched.
“All”: Applies settings to all inputs.
“Viewing Only”: Applies settings only to the current input.

Picture Mode

Selects the picture mode.
“Vivid”: For enhanced picture contrast and sharpness.
“Standard”: For standard picture. Recommended for home entertainment.
“Custom”: Allows you to store your preferred settings.

Reset

Resets all the “Picture” settings except “Target Inputs” and “Picture Mode” to the factory settings.

Backlight

Adjusts the brightness of the backlight.

Picture

Increases or decreases picture contrast.

Brightness

Brightens or darkens the picture.

Color

Increases or decreases color intensity.

Tip

This function is not available for a PC input source.

Hue

Increases or decreases the green tones and red tones.

Tip

“Hue” can only be adjusted for an NTSC color signal (e.g. U.S.A. video tapes).

Color Temperature

Adjusts the whiteness of the picture.
“Cool”: Gives the white colors a blue tint.
“Neutral”: Gives the white colors a neutral tint.
“Warm1”/“Warm2”: Gives the white colors a red tint. “Warm2” gives a redder tint than “Warm1”.

Tip

“Warm1” and “Warm2” can only be selected when you set “Picture Mode” to “Custom”.

Sharpness

Sharpens or softens the picture.

Tip

This function is not available for a PC input source.

Noise Reduction

Reduces the picture noise (snowy picture) in a weak broadcast signal.
“Auto”: Automatically reduces the picture noise.
“High”/“Medium”/“Low”: Modifies the effect of the noise reduction.
“Off”: Turns off the Noise Reduction feature.

Tips

- “Auto” is available when watching analog channel inputs and “Target Inputs” is set to “Viewing Only”.
- This function is not available for a PC input source.

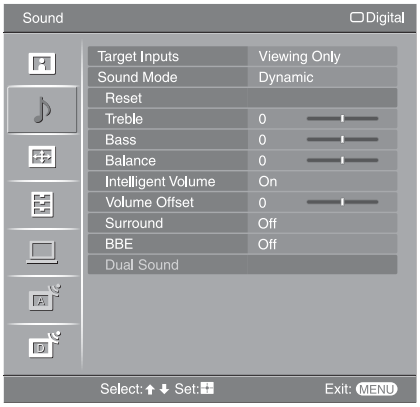
Advanced Settings

Customizes the Picture function in more detail. When you set “Picture Mode” to “Custom”, you can set/change these settings.
“Reset”: Resets all the advanced settings to the factory settings.
“Black Corrector”: Enhances black areas of the picture for stronger contrast.
“Contrast Enhancer”: Automatically adjusts “Picture” to the most suitable settings judging from the brightness of the screen. This setting is especially effective for dark images, increasing vibrancy in the picture.
“Gamma”: Adjusts the balance between bright and dark areas of the picture.
“Clear White”: Emphasizes white colors.
“Live Color”: Makes colors more vivid.
“Color Space”: Changes the color reproduction gamut. “Wide” reproduces the vivid color and “Normal” reproduces the standard color.
“MPEG Noise Reduction”: Reduces the picture noise in MPEG-compressed video.

Tips

- “Live Color” is not available when “Color Space” is set to “Normal”.
- This function is not available for a PC input source.

Sound menu



You can select the options listed below on the Sound menu. To select options in “Settings”, refer to “Picture menu” (page 20).

Target Inputs

Selects whether to apply settings made in the Sound menu to all inputs, or only to the input currently being watched.
“All”: Applies settings to all inputs.
“Viewing Only”: Applies settings only to the current input.

Sound Mode

Selects the sound mode.
“Dynamic”: Enhances treble and bass.
“Standard”: For standard sound. Recommended for home entertainment.
“Custom”: Flat response. Also allows you to store your preferred settings.

Reset

Resets all the “Sound” settings except “Target Inputs”, “Sound Mode” and “Dual Sound” to the factory settings.

Treble

Adjusts higher-pitched sounds.

Bass

Adjusts lower-pitched sounds.

Balance

Emphasizes left or right speaker balance.

Intelligent Volume

Keeps a constant volume level even when volume level gaps occur (e.g. adverts tend to be louder than programs).

Volume Offset

Increases or decreases the sound level.

Surround

Selects the surround mode.
“TruSurround XT”: For surround sound (for stereo program only).
“Simulated Stereo”: Adds a surround-like effect to mono programs.
“Off”: For normal stereo or mono reception.

BBE

Gives sound more impact by compensating for phase effects in speakers using the “BBE High Definition Sound System”.
To reproduce sounds with impact, select “High” (more impact) or “Low” (less impact). Otherwise select “Off”.

Dual Sound

Selects the sound from the speaker for a stereo or bilingual broadcast.
The selection varies, depending on the Broadcasting.

Broadcasting	Selection
NICAM stereo	NICAM (stereo sound) Mono (regular sound)
NICAM bilingual	NICAM Main (main sound) NICAM Sub (sub sound) Mono (regular sound)
NICAM monaural	NICAM Main (main sound) Mono (regular sound)
A2 (German) stereo	Stereo (stereo sound) Mono (regular sound)
A2 (German) bilingual	Main (main sound) Sub (sub sound)

Notes

- If the signal is very weak, the sound becomes monaural automatically.
- If the stereo sound is noisy when receiving a NICAM program, select “Mono”. The sound becomes monaural, but the noise is reduced.
- The Dual Sound setting is memorized for each program position.
- You cannot receive a stereo broadcast signal when “Mono” is selected for the program position.
- You cannot receive stereo or dual sound when “Low” or “High” is selected in “Audio Filter” (page 31).

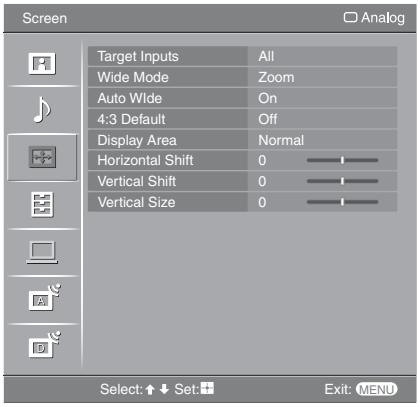
Tips

- If you select other equipment connected to the TV, set “Dual Sound” to “Stereo”, “Main” or “Sub”.
- This option is not available in digital mode.

Tip

Sound menu options other than “Dual Sound” cannot be used for headphones and audio output jacks.

Screen menu



You can select the options listed below on the Screen menu. To select options in “Settings”, refer to “Picture menu” (page 20).

Target Inputs

Selects whether to apply settings made in the Screen menu to all inputs, or only to the input currently being watched.
“All”: Applies settings to all inputs.
“Viewing Only”: Applies settings only to the current input.

Wide Mode

For details about “Wide Mode”, see “To change the screen format manually – Wide Mode” (page 15).

Tip

This option is fixed to “Full” in digital mode.

Auto Wide

Automatically changes “Wide Mode” according to the input signal. To keep your setting, select “Off”.

Tips

- Even if “Auto Wide” is set to “On” or “Off”, you can always modify the format of the screen by pressing repeatedly.
- “Auto Wide” is available for PAL, SECAM and NTSC signals only.
- This option is not available in digital mode.

4:3 Default

Selects the default screen format for use with 4:3 broadcasts.
“Wide Zoom”: Enlarges the 4:3 picture to fill the 16:9 screen, keeping the original image as much as possible.
“Normal”: Displays conventional 4:3 broadcasts in the correct proportions.
“Off”: Keeps the current “Wide Mode” setting when the channel or input is changed.

Tips

- This option is available only if “Auto Wide” is set to “On”.
- This option is not available in digital mode.

Display Area

Adjusts the screen area displaying the picture.
“Normal”: Displays the picture in the original size.
“-1”/“-2”: Enlarges the picture to hide the edge of the picture.

Horizontal Shift

Adjusts the horizontal position of the picture.

Vertical Shift

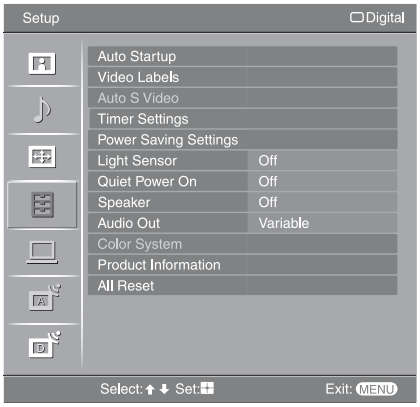
Adjusts the vertical position of the picture when “Wide Mode” is set to “Zoom”.

Tip

This option is not available in digital mode.

Vertical Size	Adjusts the vertical size of the picture when “Wide Mode” is set to “Wide Zoom” or “Zoom”. **Tip** This option is not available in digital mode.

Setup menu



You can select the options listed below on the Setup menu. To select options in "Settings", refer to "Picture menu" (page 20).

Auto Startup

Starts the "first time operation menu" to tune in available digital and analog channels. Usually, you do not need to do this operation because channels already tuned when the TV was first installed (page 6). However, this option allows you to repeat the process (e.g. to retune the TV after moving house, or to search for new channels that have been launched by broadcasters).

Video Labels

Assigns a name to any equipment connected to the side and rear jacks. The name will be displayed briefly on the screen when the equipment is selected. You can skip input signals from connected equipment that you do not want displayed on the screen.

1 Press ⇧/⇩ to select the desired input source, then press ⊕.

2 Press ⇧/⇩ to select the desired option below, then press ⊕.

Equipment labels: Uses one of the preset labels to assign a name to connected equipment.

"Edit": Creates your own label. Follow steps 2 to 4 of "Program Labels" (page 30).

"Skip": Skips an unnecessary input source.

Auto S Video

Selects the input signal from S video jack S 1/2 when S / 1/2 jacks are both connected.

"On": Switches automatically between the S video jack and the composite video jacks depending on the cable connection.

"Off": Activates the composite video jacks.

Timer Settings

Sets the timer to switch on/off the TV.

Sleep Timer

Sets a period of time after which the TV automatically switches itself into standby mode.

When the "Sleep Timer" is activated, the ⏲ (Timer) indicator on the TV (front) lights up in orange.

Tips

- If you switch off the TV and switch it on again, "Sleep Timer" is reset to "Off".
- "TV will soon turn off by Sleep Timer" appears on the screen one minute before the TV switches to standby mode.

On Timer

Sets the timer to switch on the TV from standby mode.
“Day”: Selects the day on which you want to activate the On Timer.
“Time”: Sets the time to switch on the TV.
“Duration”: Selects the time period after which the TV automatically switches to standby mode again.
“Volume Setup”: Sets the volume for when the timer switches on the TV.

Clock Set

Sets the clock using the following menu selections in “Time Adjustment”.
“Auto”: The clock is set automatically when a digitally broadcast time signal is received.
“Manual”: Sets the clock manually when digital channels have not been stored, or when you cannot receive the time correctly. Set the “Day” and “Time”.

Power Saving Settings

Power Saving

Selects the power saving mode to reduce the power consumption of the TV.
When “Picture Off” is selected, the picture is switched off and the ⊠ (Picture Off) indicator on the TV (front) lights up in green. The sound remains unchanged.

Power Consumption

Displays the power consumption level of the selected power saving mode.
When “Display” is selected, the power consumption level will be displayed on the screen when you press ⊞ ? (other than in digital mode) or when you turn on the TV.

Light Sensor

“On”: Automatically optimizes the picture settings according to the ambient light in the room.
“Off”: Turns off the “Light Sensor” feature.

Note

Be sure not to put anything over the sensor, as its function may be affected. See page 13 for further information on the sensor.

Quiet Power On

Sets the volume control at a low level when the TV is first turned on, gradually increasing the sound to a preset level.

Speaker

Switches on/off the TV’s internal speakers.
“On”: The TV speakers are turned on in order to listen to the TV’s sound through the TV speakers.
“Off”: The TV speakers are turned off in order to listen to the TV’s sound only through your external audio equipment connected to the audio output jacks.

Audio Out

“Variable”: The audio output from your audio system can be controlled by the TV’s remote.
“Fixed”: The audio output of the TV is fixed. Use your audio receiver’s volume control to adjust the volume (and other audio settings) through your audio system.

Color System

Selects the color system (“Auto”, “PAL”, “SECAM”, “NTSC3.58”, “NTSC4.43” or “PAL60”) according to the input signal from the input source.

Tip

This option is not available in digital mode, or when watching HD/DVD, PC or HDMI inputs.

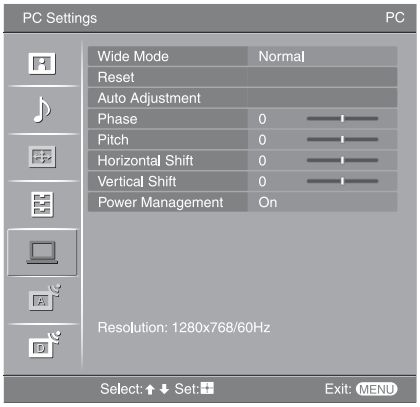
Product Information

Displays your TV’s product information.

Continued

All Reset	Resets all settings to the factory settings and then displays the Auto Startup screen. **Note** All settings, including Digital Favorite list, auto tuned channels, etc. will be reset.

PC Settings menu



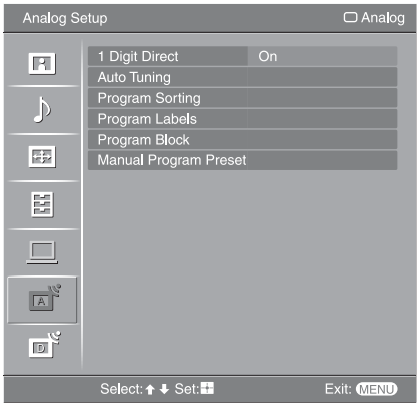
You can select the options listed below on the PC Settings menu when the TV is connected to a PC.

1 Press →/↓ repeatedly until →PC appears on the screen.

2 Press MENU to display the PC settings menu.

Wide Mode	Selects the screen format (see page 15). "Normal": Displays the picture in its original size. "Full 1": Enlarges the picture to fill the display area, keeping its original horizontal-to-vertical aspect ratio. "Full 2": Enlarges the picture to fill the display area.
Reset	Resets all the PC settings to the factory settings.
Auto Adjustment	Automatically adjusts the display position, phase and pitch of the picture when the TV receives an input signal from a connected PC. **Tip** Auto Adjustment may not work well with some input signals. In such cases, manually adjust "Phase", "Pitch", "Horizontal Shift" and "Vertical Shift".
Phase	Adjusts the phase when the screen flickers.
Pitch	Adjusts the pitch when the picture has unwanted vertical stripes.
Horizontal Shift	Adjusts the horizontal position of the picture.
Vertical Shift	Adjusts the vertical position of the picture.
Power Management	Switches the TV to standby mode if no signal is received for 30 seconds.

Analog Setup menu



You can select the options listed below on the Analog Setup menu. To select options in “Settings”, refer to “Picture menu” (page 20).

1 Digit Direct

When “1 Digit Direct” is set to “On”, you can select an analog channel using one preset number button (0 - 9) on the remote.

Note

When “1 Digit Direct” is set to “On”, you cannot select channel numbers 10 and above entering two digits using the remote.

Auto Tuning

Tunes in all the available analog channels.
Usually you do not need to do this operation because the channels are already tuned when the TV was first installed (page 6). However, this option allows you to repeat the process (e.g. to retune the TV after moving house, or to search for new channels that have been launched by broadcasters).

Program Sorting

Changes the order in which the analog channels are stored on the TV.

1 Press ⇧/⇩ to select the channel you want to move to a new position, then press ⊕.
2 Press ⇧/⇩ to select the new position for your channel, then press ⊕.

Program Labels

Assigns a channel name of your choice up to five letters or numbers. The name will be displayed briefly on the screen when the channel is selected.

1 Press ⇧/⇩ to select the channel you want to name, then press ⊕.
2 Press ⇧/⇩ to select the desired letter or number (“_” for a blank space), then press ⇨.

If you input a wrong character

Press ⇦/⇨ to select the wrong character. Then, press ⇧/⇩ to select the correct character.

To delete all the characters

Select “Reset”, then press ⊕.

3 Repeat the procedure in step 2 until the name is complete.
4 Select “OK”, then press ⊕.

Program Block

Blocks an individual channel from being watched.

1 Press ⇧/⇩ to select the channel you want to block, then press ⊕.
2 Press ⇧/⇩ to select “Block”, then press ⊕.
To watch the channel, select “Allow”.

Manual Program Preset

Before selecting “Label”/“AFT”/“Audio Filter”/“Skip”, press PROG +/- to select the program number with the channel. You cannot select a program number that is set to skip (see below).

Program/TV System/VHF or UHF

Presets program channels manually.

1. Select “Program”, then press ⊕.
2. Press ⇧/⇩ to select the program number you want to manually tune (if tuning a VCR, select channel 00), then press ⊕.
3. Press ⇧/⇩ to select “TV System”, then press ⊕.
4. Press ⇧/⇩ to select the best received TV broadcast systems, then press ⊕.
5. Press ⇧/⇩ to select either “VHF Low”, “VHF High” or “UHF”, then press ⊕.
6. Press ⇦/⇨ until the desired channel’s broadcast appears on the TV screen, then press ⊕.

Note

The frequency range indication (“VHF Low”, “VHF High” or “UHF”) switches automatically.

Label

Assigns a name of your choice, up to five letters or numbers, to the selected channel. This name will be displayed briefly on the screen when the channel is selected.
To input characters, follow steps 2 to 4 of “Program Labels” (page 30).

AFT

Allows you to fine-tune the selected program number manually if you feel that a slight tuning adjustment will improve the picture quality.
You can adjust the fine tuning over a range of -15 to +15. When “On” is selected, the fine tuning is performed automatically.

Audio Filter

Improves the sound for individual channels in the case of distortion in mono broadcasts. Sometimes a non-standard broadcast signal can cause sound distortion or intermittent sound muting when watching mono programs.
If you do not experience any sound distortion, we recommend that you leave this option set to the factory setting “Off”.

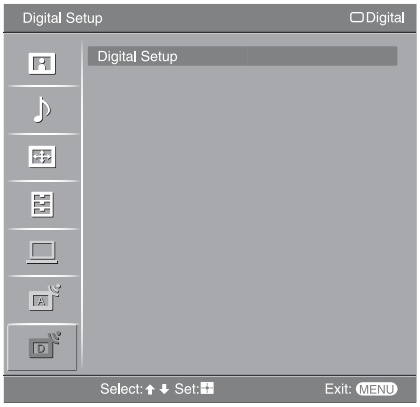
Note

You cannot receive stereo or dual sound when “Low” or “High” is selected.

Skip

Skips unused analog channels when you press PROG +/- to select channels. (You can still select a skipped channel using the number buttons.)

Digital Setup menu DVB



You can select the options listed below on the Digital Setup menu. To select options in “Settings”, refer to “Picture menu” (page 20).

Note

Some functions may not be available in some areas.

Digital Settings

Displays the “Digital Settings” menu.

Audio Setup

This option enables you to enjoy audio in various environments.
“Audio Output Control”: Sets the priority for digital audio output (optical) (when “Dolby Digital” and “MPEG” audio are available).
“MPEG Audio Adjustment”: Adjusts MPEG audio Control level to Dolby Digital audio level.

Time Setup

Sets the time zone in which you are using the TV. For details, refer to “5: Auto-tuning the TV” on page 6.

Digital Tuning

Displays the “Digital Tuning” menu.

Full Scan

Tunes in all the available digital channels.
Usually you do not need to do this operation because the channels were already tuned when the TV was first installed (page 6). However, this option allows you to repeat the process (e.g. to retune the TV after moving house, or to search for new channels that have been launched by broadcasters). For details, refer to “5: Auto-tuning the TV” on page 6.

Quick Scan

Tunes in all the expected digital channels in your area.
Usually you do not need to do this operation because the channels were already tuned when the TV was first installed (page 6). However, this option allows you to repeat the process (e.g. to retune the TV after moving house, or to search for new channels that have been launched by broadcasters). For details, refer to “5: Auto-tuning the TV” on page 6.

Manual Scan

This option allows channels to be manually tuned and stored. Due to the technical nature of the settings, it is recommended that only experienced service personnel use this option.

Favorite Preset

Presets Favorite List 1 and Favorite List 2.

1 Press ⇧/⇩ to select “Favorite List 1” or “Favorite List 2”, then press ⊕.

2 Press ⇧/⇩ to select the desired allocation number, then press ⊕.

3 Press ⇧/⇩ to select the channel you want to allocate, then press ⊕.

To overwrite a new channel selection (over one that has been pre-allocated), follow step 3 to select the newly desired channel, then press ⊕.
To delete a pre-allocated channel, follow step 2 (to select the desired channel), then select “Delete” in step 3.

Parental Control

Sets a parental guidance level. Programs that exceed the set level can only be watched after entering the correct password. The password is initially set to “0000”. If you want to change the password, follow “To change the password” (see below).

1 Press the number buttons to enter your password.

2 Press ⇧/⇩ to select “Parental Rating”, then press ⊕.

3 Press ⇧/⇩ to select the level you want to set (refer to the table below), then press ⊕.

Level	Function
Block All	All programs need a password to view.
Block G and above	To lock “General” and above programs.
Block PG and above	To lock “Parental Guidance” and above programs.
Block M and above	To lock “Mature” and above programs.
Block MA and above	To lock “Mature Adult” and above programs.
Block AV and above	To lock “Adult/Violence” and above programs.
Block R and above	To lock “Restricted” and above programs.
No Block (default setting)	No programs need a password to view.

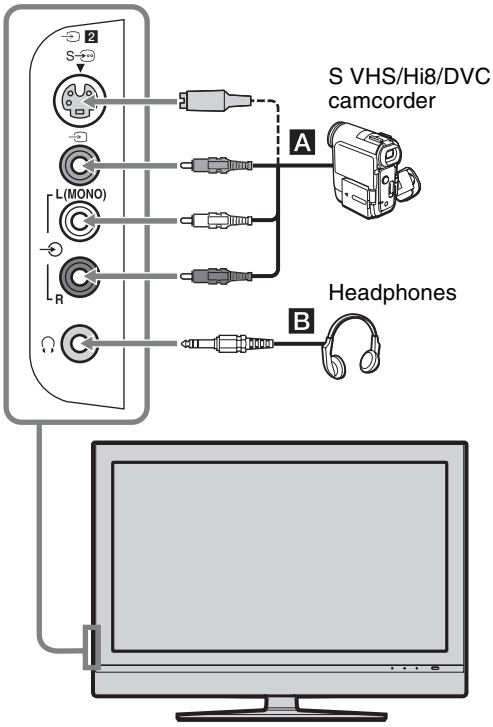
To change the password

Select “Change Password” in step 2 above, then press ⊕. Enter the new password using the number buttons. Enter the new password again.

Connecting optional equipment

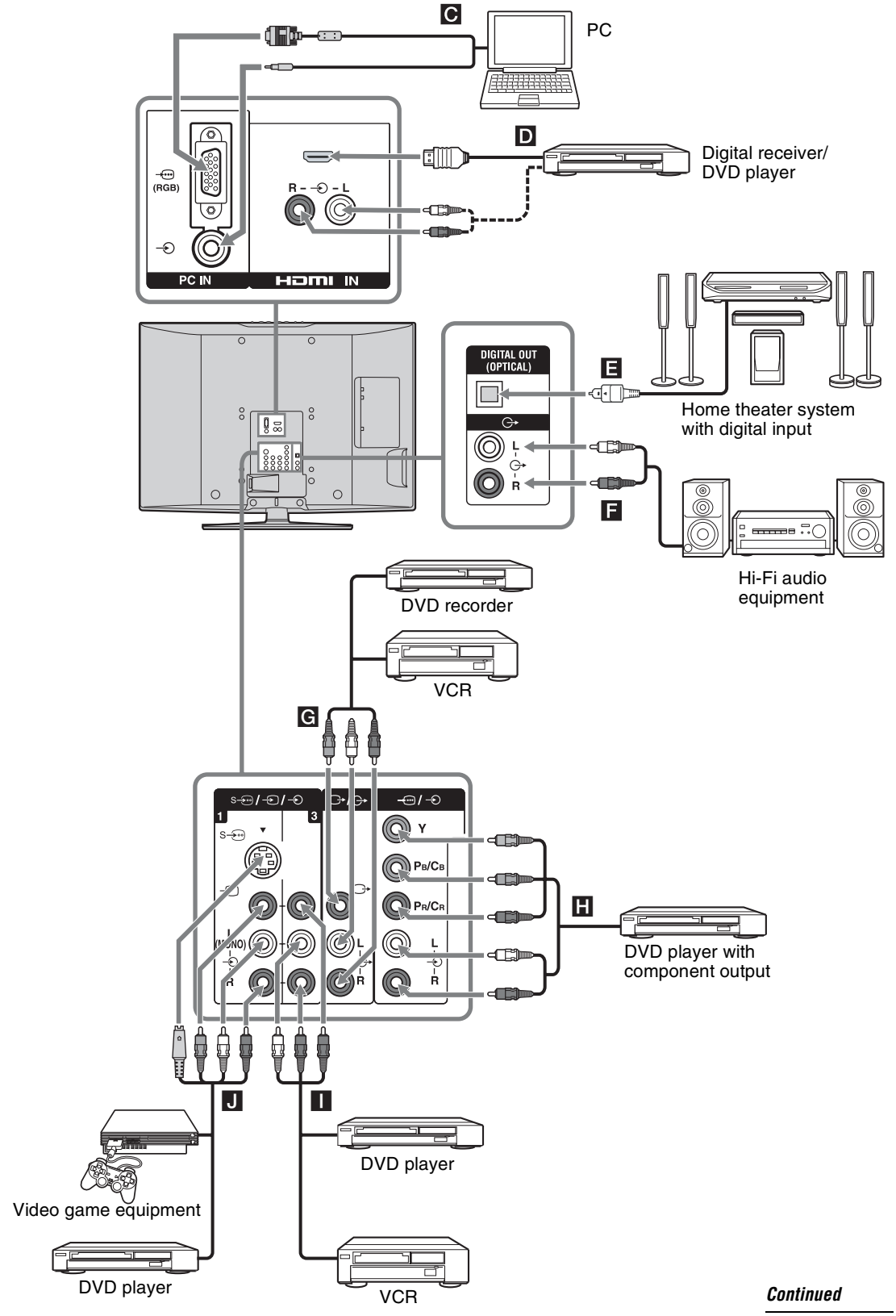
You can connect a wide range of optional equipment to your TV. Connecting cables are not supplied.

Connecting to the TV (side)



To connect	Do this
S VHS/Hi8/DVC camcorder **A**	Connect to the S video jack S 2 or the composite video jack 2, and the audio jacks 2. To avoid picture noise, do not connect the camcorder to the video jack 2 and the S video jack S 2 at the same time. If you connect mono equipment, connect to the L(MONO) jack 2.
Headphones **B**	Connect to the jack to listen to sound from the TV on headphones.

Connecting to the TV (rear)



Continued

To connect	Do this
PC **C**	Connect to the PC IN (RGB) jack and the audio jack. It is recommended to use a PC cable with ferrites.
Digital receiver or DVD player **D**	Connect to the HDMI IN jack if the equipment has an HDMI jack. The digital video and audio signals are input from the equipment. If the equipment has a DVI jack, connect the DVI jack to the HDMI IN jack through a DVI - HDMI adaptor interface (not supplied), and connect the equipment's audio out jacks to the audio in the HDMI IN jacks. **Notes** • The HDMI jack only support the following video inputs: 480i, 480p, 576i, 576p, 720p and 1080i. To connect a PC, use the PC IN jack. • Be sure to use only an HDMI cable that bears the HDMI logo.
Home theater system with digital input **E**	Connect to the DIGITAL OUT (OPTICAL) jack using the Optical audio cable. **Note** The DIGITAL OUT (OPTICAL) jack only supports digital terrestrial signals.
Hi-Fi audio equipment **F**	Connect to the audio output jacks to listen to the sound from the TV on Hi-Fi audio equipment.
DVD recorder or VCR **G**	Connect to the video output jack to record the image from the TV. Connect to the audio output jacks to record the sound from the TV on the DVD recorder or VCR. **Note** Digital broadcasting images that are recorded on this TV appear enlarged when they are played on a 4:3 screen, which cannot be adjusted to other aspect modes.
DVD player with component output **H**	Connect to the component jacks and the audio jacks /.
Video game equipment, DVD player or VCR **I** **J**	Connect to the S video jack S 1 or the video jack 1 or 3, and the audio jacks 1 or 3. To avoid picture noise, do not connect the camcorder to the video jack 1 and the S video jack S 1 at the same time. If you connect mono equipment, connect to the L (MONO) jack 1 or 3.

To use the Tools menu in PC input mode

Press TOOLS to display the following options when viewing pictures input from the connected PC.

Options	Description
Close	Close the Tools Menu.
Power Saving	See page 27.
Picture Mode	See page 20.
Sound Mode	See page 22.
Auto Adjustment	See page 29.
Horizontal Shift	See page 29.
Vertical Shift	See page 29.

Specifications

Display Unit

Power Requirements:
220–240 V AC, 50 Hz
Screen Size:
KDL-46V2000: 46 inches
KDL-40V2000: 40 inches
KDL-32V2000: 32 inches
Display Resolution:
1,366 dots (horizontal) × 786 lines (vertical)
Power Consumption:
Indicated on the rear of the TV
Dimensions (w × h × d):
KDL-46V2000:
Approx. 1120 × 805 × 334 mm (with stand)
Approx. 1120 × 755 × 116 mm (without stand)
KDL-40V2000:
Approx. 988 × 716 × 334 mm (with stand)
Approx. 988 × 664 × 103 mm (without stand)
KDL-32V2000:
Approx. 792 × 593 × 219 mm (with stand)
Approx. 792 × 546 × 99 mm (without stand)
Weight:
KDL-46V2000:
Approx. 35 kg (with stand)
Approx. 29 kg (without stand)
KDL-40V2000:
Approx. 28 kg (with stand)
Approx. 22 kg (without stand)
KDL-32V2000:
Approx. 18 kg (with stand)
Approx. 16 kg (without stand)

Panel System

LCD (Liquid Crystal Display) Panel

TV System

Analog: B/G, I, D/K, M
Digital: DVB-T

Color/Video System

Analog: PAL, PAL60, SECAM, NTSC4.43, NTSC 3.58
Digital: MP@HL and MP@ML

Antenna

75 ohm external terminals

Channel Coverage

Analog: B/G
VHF: E2 to E12 / UHF: E21 to E69 /
CATV: S01 to S03, S1 to S41
VHF: 0 to 12, 5A, 9A / UHF: 28 to 69 /
CATV: S01 to S03, S1 to S44 (Australia only)
VHF: 1 to 11 / UHF: 21 to 69 /
CATV: S01 to S03, S1 to S41(New Zealand only)
I
UHF: B21 to B69 / CATV: S01 to S03, S1 to S41
D/K
VHF: C1 to C12, R1 to R12 /
UHF: C13 to C57, R21 to R60 /
CATV: S01 to S03, S1 to S41, Z1 to Z39
M
VHF: A2 to A13 / UHF: A14 to A79 /
CATV: A-8 to A-2, A to W+4, W+6 to W+84
Digital: VHF/UHF

Terminals

S VIDEO 1/2: S
S VIDEO (4-pin mini DIN): S
Y: 1.0 Vp-p, 75 ohms unbalanced, sync negative
C: 0.286 Vp-p (Burst signal), 75ohms
VIDEO IN 1/2/3:
VIDEO:
1 Vp-p, 75 ohms unbalanced, sync negative
AUDIO:
500 mVrms
Impedance: 47 kilohms
HD/DVD IN:
Y, P_B/C_B, P_R/C_R (Component Video):
Y: 1.0 Vp-p, 75 ohms unbalanced, sync negative
P_B/C_B: 0.7 Vp-p, 75 ohms
P_R/C_R: 0.7 Vp-p, 75 ohms
Signal format: 480i, 576i, 480p, 576p, 720p, 1080i
AUDIO:
500 mVrms
Impedance: 47 kilohms
VIDEO OUT:
VIDEO:
1 Vp-p, 75 ohms unbalanced, sync negative
AUDIO:
More than 1 Vrms at the maximum volume setting (Variable)
More than 500 mVrms (Fixed)
DIGITAL OUT (OPTICAL) (DIGITAL OUT (OPTICAL) jack)
HDMI IN
Video: 1080i, 720p, 576p, 576i, 480p, 480i
Audio: Two channel linear PCM
33, 44.1 and 48 kHz, 16, 20 and 24 bits
PC:
D-sub 15-pin, analog RGB, 0.7 Vp-p,
75 ohms, positive
See the PC Input Signal Reference Chart on page 38.
AUDIO:
Stereo minijack, 0.5 Vrms, 1 kilohm
Headphones
Stereo minijack

Sound Output

10 W + 10 W

Supplied Accessories

Refer to “1: Checking the accessories” on page 4.

Continued

Optional Accessories

- Wall-Mount Bracket
  SU-WL53 (for KDL-46V2000/KDL-40V2000/KDL-32V2000)
  SU-WL51 (for KDL-46V2000/KDL-40V2000)
  SU-WL31 (for KDL-32V2000)

Design and specifications are subject to change without notice.

PC Input Signal Reference Chart

Signals	Horizontal (Pixel)	Vertical (Line)	Horizontal frequency (kHz)	Vertical frequency (Hz)	Standard
VGA	**640**	**480**	**31.5**	**60**	**VGA**
	640	480	37.5	75	VESA
	720	400	31.5	70	VGA-T
SVGA	**800**	**600**	**37.9**	**60**	**VESA Guidelines**
	800	600	46.9	75	VESA
XGA	**1024**	**768**	**48.4**	**60**	**VESA Guidelines**
	1024	768	56.5	70	VESA
	1024	768	60	75	VESA
WXGA	**1280**	**768**	**47.4**	**60**	**VESA**
	1280	**768**	**47.8**	**60**	**VESA**
	1360	**768**	**47.7**	**60**	**VESA**

- This TV's PC input does not support Sync on Green or Composite Sync.
- This TV's PC input does not support interlaced signals.
- For the best picture quality, it is recommended to use the signals (boldfaced) in the above chart with a 60 Hz vertical frequency from a personal computer. In plug and play, signals with a 60 Hz vertical frequency will be selected automatically.

i-Plate Display Language Code

Code	Language	Code	Language	Code	Language	Code	Language
Af	Afrikaans	El	Greek	Ita	Italian	Spa	Spanish
Afr	Afrikaans	Ell	Greek	Jpn	Japanese	Tam	Tamil
Ar	Arabic	En	English	Kan	Kannada	Tel	Telugu
Ara	Arabic	Eng	English	Kor	Korean	Zho	Chinese
Aus	Australian	Fr	French	Mal	Malayalam	U1	Unknown 1
Ben	Bengali	Fra	French	Nl	Dutch	U2	Unknown 2
Bn	Bengali	Fre	French	Nld	Dutch		
Chi	Chinese	Gem	German	Pan	Panjabi		
De	German	Ger	German	Por	Portuguese		
Deu	German	Gre	Greek	Raj	Rajasthani		
Dut	Dutch	Hi	Hindi	Rus	Russian		
Egy	Egyptian	Hin	Hindi	San	Sanskrit		

Troubleshooting

Check whether the ⏻ (standby) indicator is flashing in red.

When it is flashing

The self-diagnosis function is activated.

1 Count how many ⏻ (standby) indicator flashes between each two second break.
For example, the indicator flashes three times, then there is a two second break, followed by another three flashes, etc.

2 Press ⏻ on the TV (top side) to switch it off, disconnect the AC power cord, and inform your dealer or Sony service center of how the indicator flashes (number of flashes).

When it is not flashing

1 Check the items in the tables below.

2 If the problem still persists, have your TV serviced by qualified service personnel.

Picture

Problem	Cause/Remedy
No picture (screen is dark) and no sound	• Check the antenna connection. • Connect the TV to AC power outlet, and press ⏻ on the TV (top side). • If the ⏻ (standby) indicator lights up in red, press I/⏻.
No picture or no menu information from equipment connected to the video input jack	• Check that the optional equipment is on and press →/⊡ repeatedly until the correct input symbol is displayed on the screen. • Check the connection between the optional equipment and the TV.
Double images or ghosting	• Check antenna/cable connections. • Check the antenna location and direction.
Only snow and noise appear on the screen	• Check if the antenna is broken or bent. • Check if the antenna has reached the end of its serviceable life (three to five years in normal use, one to two years at the seaside).
Distorted picture (dotted lines or stripes)	• Keep the TV away from electrical noise sources such as cars, motorcycles, hair-dryers or optical equipment. • When installing optional equipment, leave some space between the optional equipment and the TV. • Make sure that the antenna is connected using the supplied antenna cable. • Keep the antenna cable away from other connecting cables.
Picture noise when viewing a TV channel	• Select “Manual Program Preset” in the “Analog Setup” menu and adjust “AFT” (Automatic Fine Tuning) to obtain better picture reception (page 31).
Some tiny black points and/or bright points appear on the screen	• The picture of a display unit is composed of pixels. Tiny black points and/or bright points (pixels) on the screen do not indicate a malfunction.
No color on programs	• Select “Reset” in the “Picture” menu to return to the factory settings (page 20).
No color or irregular color when viewing a signal from the Y, PB/CB, PR/CR jacks →⊡	• Check the connection of the Y, PB/CB, PR/CR jacks →⊡. • Make sure that the Y, PB/CB, PR/CR jacks →⊡ are firmly seated in their respective jacks.

Continued

Sound

Problem	Cause/Remedy
No sound, but good picture	• Press +/– or (Mute). • Check that “Speaker” is set to “On” in the “Setup” menu (page 27).
Noisy sound	• See “Picture noise” causes/remedies on page 39.

Channels

Problem	Cause/Remedy
The desired channel cannot be selected	• Switch between digital and analog mode and select the desired digital/ analog channel.
Some channels are blank	• Scrambled/Subscription only channel. Subscribe to the Pay Per View service. • Channel is used only for data (no picture or sound). • Contact the broadcaster for transmission details.
Digital channels are not displayed	• Contact a local installer to find out if digital transmissions are provided in your area. • Upgrade to a higher gain antenna.
Some channels cannot be selected	• Once you select a channel within your Favorite List of channels, pressing PROG +/- will select only channels from your Favorite List. To select a channel that has not been programmed as a Favorite List channel, use the Program List feature or the number buttons.

General

Problem	Cause/Remedy
The TV turns off automatically (the TV enters standby mode)	• Check if the “Sleep Timer” is activated, or confirm the “Duration” setting of “On Timer” (page 26).
The TV turns on automatically	• Check if the “On Timer” is activated (page 27).
Some input sources cannot be selected	• Select “Video Labels” in the “Setup” menu and cancel “Skip” of the input source (page 26).
The remote does not function	• Check that the remote is set correctly for the equipment you are using. • Replace the batteries.
The recorded images appear enlarged when they are played on a 4:3 screen size TV	• The images of digital broadcasting recorded on this TV appear enlarged when they are played on a 4:3 screen size TV that cannot be adjusted to other aspect modes.
Forgotten Parental Control password	• Select “All Reset” in the “Setup” menu (page 28).

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